REMARKS

The Office Action of February 11, 2009, has been carefully studied. Claims 1-20 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Election/Restriction

Claims 4, 7, 8, 14 and 15 have been withdrawn from further consideration as being drawn to a nonelected species.

Claim Amendments

Claim 1 has been amended to specify that the carrier "homogeneously" supports vitamin glycoside. Support for this amendment can be found in the specification as filed at page 12, lines 11-15.

The amount of vitamin glycoside supported on the carrier and the average particle size of the claimed functional powdery product are specified as "0.01 to 30% (w/w)" and "0.01 to 30 μm", respectively. Support for this amendment can be found in the specification as filed at page 12, lines 1-4 and page 11, lines 19-21.

Art Rejections

Claims 1-3, 5, 6, 9, 10 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shefer et al., US Published Application 2003/0232091, Allen et al., *Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems*, page 264 (2004), Szycher, *high Performance Biomaterials: A Complete Guide to Medical and Pharmaceutical Applications*, pages 625-626 (1991) and Greers et al., US Published Application 2003/0170186.

The Examiner states that Shefer discloses "a composition formed of hydrophobic microspheres of particles encapsulating retinol", which can be incorporated into any cosmetic, dermatological, or pharmaceutical compositions known in the art, including liquid, powder, etc. The Examiner states that Shefer teaches that the stabilization of retinol by allowing the microsphere to support it "sustains the release of retinol during the product shelf life" and "guarantees the results desired in storing and handling there composition."

Based upon this, the Examiner considers that the difference between the herein claimed invention and what is disclosed in Shefer are different in only the following two points:

1. Shefer does not teach functional powdery products wherein the carrier is cellulose; and

2. Shefer does not teach a functional powdery product wherein the carrier supports quercetin glycoside as encompassed by the instant claims.

The Examiner alleges that the above differences are obvious in view of Allen, Szycher and Greers.

This rejection is respectfully traversed. Claim 1 has been amended to recite a functional powdery product that is prepared by allowing a carrier to **homogeneously** support one or more members selected from vitamin glycosides **on the surface, wherein the amount of said vitamin glycoside supported on said carrier is 0.01 to 30% (w/w) of the amount of said functional powdery product, and wherein the average particle size of said functional powdery product is 0.01 to 30 μm**.

As shown in Experiments 1 and 2 of the present application, a functional powdery product prepared by allowing a carrier to homogeneously to support glycosyl rutin exhibited superior UV absorbing ability as compared with a simple mixture of a carrier and glycosyl rutin. Furthermore, as described in the specification at page 11, lines 19-21, the functional powder product having an average particle size in the range of 0.01 to 30 μm provides good usability to the

external dermatological agents into which the functional powdery product is incorporated.

In addition, as described in the specification at page 12, lines 1-4, when the total amount of vitamin glycosides supported on the carriers is in the range of 0.01 to 30% (w/w) of the total amount of the functional powdery product, the functional powdery product exhibits good effects and usability to the external dermatological agents into which the functional powdery product is incorporated.

The Examiner concedes that Shefer does not teach functional powdery products. Rather, Shefer discloses a composition formed of hydrophobic microspheres or particles **encapsulating** retinol. In the compositions disclosed in Shefer, retinol is not supported on the surface of a carrier, but is encapsulated into hydrophobic microspheres or particles. It is understood that retinol is unstable and that the Shefer formulation prevents oxidation of the retinol. To prevent oxidation of the retinol, Shefer surrounds retinol with a coating to provide solid hydrophobic particles of encapsulated retinol (paragraph 0072). The retinol is thus provided in a controlled-release form (paragraph 0066). It is clear from this that the active ingredient is not on the surface of the particles, as in the herein claimed composition, but is completely surrounded by matrix material.

The Shefer particles are prepared by heating matrix material, such as solid hydrophobic material, to about 10 degrees C above the melting point of the hydrophobic material, with continuous agitation, adding retinol and other selected active ingredients to the melts with continuous agitation, and cooling the melt to ambient temperature of from a dry free-flowing powder composition (paragraphs 0075-0078). It is clear from this description of the particles that Shefer mixes the active ingredients with a hydrophobic material that completely encapsulates, or covers, the active ingredients.

Experiments 1 and 2 of the present specification demonstrate that a mere mixture of active ingredients with a carrier, in which the active ingredients are encapsulated, absorbs much less ultraviolet light than the powders claimed herein in which the active ingredient is homogeneously dispersed on the surface of the particles. In the presently claimed compositions the active ingredient is on the surface of the particles, not encapsulated.

There is nothing in Shefer that teaches powder products in which vitamin glycosides are supported homogeneously on the surface of a carrier. Shefer has no teaching regarding a functional powders product in which glycosil rutin is supported homogeneously on the surface of a carrier, nor that this exhibits superior absorption of

ultraviolet light as compared with a simple mixture of a carrier and glycosyl rutin as shown in Experiments 1 and 2 of the instant specification. It is respectfully submitted that there is absolutely nothing in Shefer that suggests the product claimed herein.

The Examiner states that Allen discloses, "[t]he rate of drug release from a solid dosage forms may be modified by technologies" such as "placing the drug on microcrystalline cellulose spheres." However, there is nothing in Allen that teaches a functional powdery product in which a carrier supports glycosyl rutin homogeneously on the surface of the carrier, nor that such a formulation exhibits higher absorption of ultraviolet rays that a simple mixture of carrier and glycosyl rutin. Furthermore, it should be noted that the size of cellulose used in Allen is 170 to 600 microns, see page 264, left column, which is much larger than the particle size of 0.01 to 30 microns claimed herein.

The Examiner states that Szycher teaches, "[m]icrospheres having different hydrophobicities can be prepared by conversion of hydrophilic surfaces of cellulose microspheres into hydrophobic ones." However, there is nothing in Szycher that teaches a functional powdery product in which a carrier supports glycosyl rutin homogeneously on the surface of the carrier, nor that such a formulation

exhibits higher absorption of ultraviolet rays that a simple mixture of carrier and glycosyl rutin. Szycher teachings nothing about the functional powdery product claimed herein.

The Examiner states that Greers discloses cosmetics comprising flavone (including quercetin) glycoside derivatives that "provide low side effect, highly effective substances, which would be easy to process and to apply." However, there is nothing in Greers that suggests the functional powdery product as recited in the present claims.

Accordingly, it is respectfully submitted that Shefer has nothing to do with the functional powdery product claimed herein, and none of the secondary references adds anything to Shefer, even if the combination were obvious, to meet the present claims. Moreover, Applicants respectfully submit that the proposed combination would not have been obvious, because there would have been no reason to abstract small bits and pieces from the subsidiary reference to modify Shefer. Withdrawal of the rejection is in order and is respectfully requested.

Claims 11-3, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shefer, Allen, Szycher and Greers and further in view of Tanabe et al., WO 2004/071472.

This rejection is respectfully traversed. Claims 11-13, 16 and 17 are all drawn to an external dermatological

agent comprising the functional powdery product of claim 1 as amended. In contrast thereto, there is nothing in any of Shefer, Allen, Szycher and Greers that even suggests this functional powdery product. Tanabe merely discloses external preparations containing sugar derivatives of α,α-trehalose. However, these preparations are not in the form of a functional powdery product as recited in claim 1 in its original form, let alone as amended, so Tanabe adds nothing to Shefer, Allen, Szycher and Greers.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

20520

By _____
Anne M. Kornbau
Registration No. 25,884

AMK:srd
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
G:\BN\S\SUMA\Kusanol\pto\2009-06-11Amendment.doc